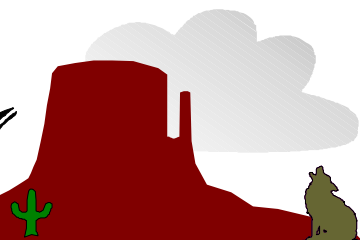


VISIBILITY



SECOND QUARTER 1999

POLLUTION PREVENTION NEWSLETTER

WHAT'S ALL THIS TALK ABOUT SUMMER OZONE?

Ground-level ozone, a principle component of smog, is one of the most prevalent air pollution problems in the United States. Nearly 100 cities across the country are currently in violation of federal standards for ground-level ozone. That number is expected to grow exponentially after this summer, when the Environmental Protection Agency's (EPA) stricter standards take effect.

Maricopa County is a "serious" nonattainment area for ground-level ozone pollution. Due to the pollution reducing strategies that have been implemented by the County, valley residence and businesses, as well as favorable weather patterns, Maricopa County has not had any ozone violations for the past two summers. If Maricopa County can achieve one more violation-free summer, the region will be in compliance with the old federal standard for ozone, which would allow us to begin working toward compliance of the new health-based 8-hour standard for ozone.

The new 8-hour national ozone standard – which goes into effect once an area meets the old 1-hour standard – was adopted by the EPA in July 1997 to be protective of public health. Medical evidence shows that long-term, low-level exposure to ozone, as measured by the new 8-hour standard, is more harmful to a

person's lungs than the short-term, high-level exposure measured by the old 1-hour standard.

The standard for ozone set by the EPA is for 1-hour exposure. Concentrations of ozone greater than 124 parts per billion averaged over one hour are counted as ozone exceedances. However, the attainment status of an area such as metropolitan Phoenix is based on a three-year record. A violation occurs when any monitor records four or more exceedances in three consecutive years.

If an ozone violation occurs during the summer of 1999, the Phoenix-metro area will be reclassified a "severe" nonattainment area. Reclassification would result in:

- Sources emitting 25 tons per year of VOC (volatile organic compounds) or NO_x (oxides of nitrogen) would be major sources, meaning that new and existing businesses making up less than 1% of the emissions inventory would be subject to more stringent permitting requirements governing their operations and expansions.
- Instead of being able to work on a long-term strategy to meet the new ozone standard, a new ozone plan would have to be prepared that demonstrates compliance with the old ozone standard by 2005. If compliance is not achieved by then, all major permitted industrial sources of VOC and NO_x could be assessed a fine of \$5,000/ton for emissions over 80% of the allowable emissions under the permit.
- All industrial sources in Maricopa County emit about 5% of the VOC and 7% of the NO_x emissions. The vast majority of

the emissions come from combustion engines, both on and off-road.

Things you can do to help reduce ozone levels include: reduce driving; refuel after 4 p.m.; schedule painting projects during cooler months, and when you paint, use water-based paint; carpool; ride the bus to work or telecommute.



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THE GOLDEN RULE AND THE DUST RULE



Dust creates PM₁₀ when it's kicked up by vehicle traffic on paved roads and when it's blown by the wind from construction sites, earthmoving operations, unpaved parking lots and roads, disturbed vacant lots, and agricultural fields. PM₁₀ is particulate matter that is ten microns (0.00039 inch) and less in size and it exists in Maricopa County's air in amounts above the National Ambient Air Quality Standards (NAAQS), the acceptable amounts of air pollution.

When an area's pollutants are above a NAAQS, the Clean Air Act (CAA) requires that the Environmental Protection Agency (EPA) designate such area as nonattainment for that pollutant. Since Maricopa County did not meet the NAAQS for PM₁₀, we were designated a moderate nonattainment area by EPA. Maricopa County, in conjunction with the Arizona Department Of Environmental Quality (ADEQ), developed a plan that proposed a basic set of control measures, which, in theory, would allow the county to comply with the NAAQS for PM₁₀. However, the control measures did not adequately reduce the amount of PM₁₀ floating around in the air. Consequently, in 1994, when Maricopa County again failed to attain the NAAQS for PM₁₀, EPA reclassified us as a serious nonattainment area. Maricopa County and ADEQ were then required to develop a plan with more comprehensive control measures.

While Maricopa County and ADEQ were developing another plan to address the reclassification, EPA, under court order as a result of a lawsuit by the Arizona Center For Law In The Public Interest, developed a Federal Implementation

Plan (FIP) to address the moderate nonattainment area classification. EPA's FIP was issued and went into effect on July 18, 1998.

In December 1998, Maricopa County and ADEQ submitted a State Implementation Plan (SIP) to EPA that described control measures to address the serious nonattainment area reclassification. If the SIP is approved by EPA, then EPA will be able to withdraw the FIP and put the SIP into effect. However, in order for the SIP to work (i.e., to allow the county to meet the NAAQS for PM₁₀), Maricopa County must revise Rule 310 (Fugitive Dust Sources).

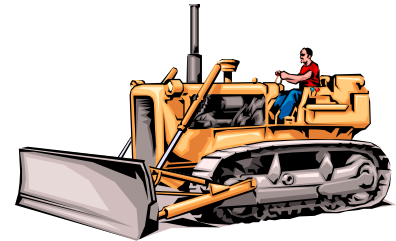
Maricopa County implements Rule 310 through a fugitive dust program. In January 1995, the fugitive dust program consisted of reviewing and evaluating the dust control plans which accompanied earthmoving permit applications and responding to complaints as they were received. Four staff members took turns at these duties. Sites such as vacant lots, unpaved parking lots and unpaved roads were not required to have permits, but they were inspected when complaints were received or activity was observed. Recognizing inefficiencies in the program, Maricopa County formed an internal review team to recommend improvements.

Since 1996, Maricopa County has been conducting public workshops, stakeholders' meetings, workgroup meetings, and field trips in order to satisfactorily revise Rule 310. In the final draft:

- Rule 310 applies to sources that are required to obtain an Earthmoving Permit and to those sources that routinely conduct dust generating operations associated with a Title V Permit, a Non-Title V Permit, or a General Permit.
- Rule 310 includes opacity and

stabilization limitations, work practices, a list of control measures for most sources, and a list of control measures for high wind conditions.

- New Rule 310.01 (Fugitive Dust From Open Areas, Vacant Lots, Unpaved Parking Lots, And Unpaved Roadways) applies to open areas, vacant lots, unpaved parking lots, and unpaved roadways, which are not addressed in Rule 310.
- New Appendix C includes test methods for the control measures required by Rule 310 and new Rule 310.01 (i.e., EPA Test Method 203(B), Appendix A to the Federal Register (CAA) 52.128, and EPA Test Methods 203(A) and 203(C)).



In 1998, Maricopa County moved three inspectors and an enforcement officer from other positions to work directly on the fugitive dust program. Since then, we have added four additional inspectors, an aide, and an enforcement officer, increasing the total personnel working on the program to twelve. The County also has 19 inspectors, aides, engineers, and supervisors who are available to monitor compliance at previously permitted facilities, perform field observations, and respond to complaints as needed.

On June 16, 1999, Maricopa County adopted the proposed revisions to Rule 310, new Rule 310.01, and new Appendix C. These will be available to the public very soon. Call Jo Crumbaker, Maricopa County Air Quality Division Planning & Analysis Section Manager, at (602) 506-6705 with questions or comments.

SUCCESSFUL POLLUTION PREVENTION STORIES

Developing An Ozone Plan

In each issue of Visibility, we will highlight some of the great strides companies are making to reduce air pollution. In this issue, the spotlight is on Intel Corporation, who has put together an effective Ozone Alert Plan to help combat the ground-level ozone that is so prevalent during the summer months in the Valley.

Intel started with the following criteria:

- "Bang For The Buck" (resources per reduced vehicle travel);
- Impact on business;
- Simple & satisfying for employees;
- Easily implemented with short notice;
- Partnering with the community.

Intel then developed key elements of the Ozone Alert Plan:

- Team-building car pooling should be the primary focus;
- Other alternative modes can be used to meet specific department and individual needs (i.e.. teleworking, bus, van pools, bike, walk, etc.);
- Free bus passes are available all the time;
- Taxi vouchers are provided for participants who have personal emergencies;
- Contractors & suppliers should be encouraged to participate.



Intel identified awareness items that would need to be addressed to make the program a success:

- Alternate start/stop times can be used to make alternative commute methods effective;
- Mass transit schedules should be widely communicated;
- No driving to lunch or commuting to other buildings (or use shuttle);
- Contractors, landscapers, etc. don't use internal combustion engines on Ozone Alert Days;
- Don't fill your gas tank on those days;
- Employees will be asked to support this program even if the alert day is on their day off (i.e. don't drive, don't use gas-powered garden equipment, etc.).

The next element in the development of the plan was to get together and find out who lives close to each other:

- Plan for as many people as can safely (i.e. enough seat belts) car pool together on Ozone Alert Days;
- Identify the driver & what time they'll pick the others up ahead of time;
- When an alert is called, simply follow the pre-determined plan;
- Make back-up plans for unforeseen circumstances (i.e. identify a secondary driver in case the primary driver is sick, on vacation, etc.).

Participating companies will receive notification by noon the day before an Ozone Alert Day so they can notify the whole company. Intel developed a communication plan for the ozone alert using resources already in place:

- E-mail messages;
- Wall & electronic bulletin boards;
- Voice mail broadcasts;
- "Ozone Alert Day" symbol on internal web page;
- Signs in lobbies and parking lots;
- Media coverage on radio and TV;
- Use of the community ozone telephone number at 506-6400;
- Sign up to receive E-Alerts from www.valleymetro.maricopa.gov.

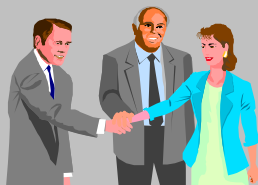
The first ozone advisory was issued for May 28, 1999, and proved to be a good "drill" for the ozone plan Intel had in place. Intel discovered they had other areas that needed to be addressed in the plan, but still ended up with a 50% overall participation rate.

If you have an innovative pollution prevention practice(s) that you'd like to share in the next issue of the "Visibility" newsletter, call **Courtney James at (602) 506-6948** or e-mail to cjames3@mail.maricopa.gov.

FREE DRY CLEANING WORKSHOP

A free workshop for dry cleaners will be held on September 15th from 6 - 8pm in Phoenix, sponsored by EPA, SBEAP and Maricopa County's Small Business Development Center (SBDC). Participants will learn about:

- Garment Cleaning Technologies & Chemistries
- Health, Fire & Safety (OSHA) Regulations
- Hazardous Waste Regulations
- Waste Water Discharge Regulations
- Environmental Clean-ups
- Cost Considerations and Estimations
- The SBDC - What is it & how it can help
- Sources of Environmental Assistance

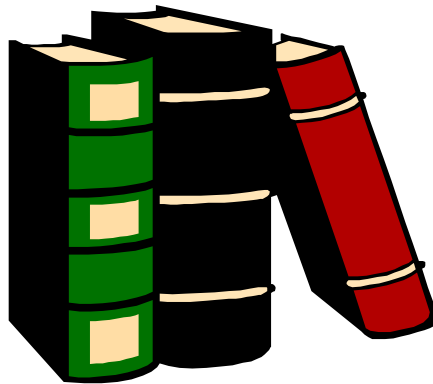


Interested? Please call (602) 506-5150 for more information or to register.

NEW RULES AND THEIR COMPLIANCE DATES

On April 7, 1999, Maricopa County adopted the following rule revisions:

- **Rule 317** (Hospital / Medical / Infectious Waste Incinerators) - The compliance deadline will be 9/15/00 or on the effective date of an EPA-approved operating permit under Title V, whichever is later.
- **New Rule 319** (Ginning Operations) - If your emission control system (ECS) meets the rule's requirements by 4/7/99, you must submit an Operation and Maintenance (O&M) Plan by 10/4/99. If you do not have an ECS, you need to submit a compliance plan by 10/4/99.
- **Rule 331** (Solvent Cleaning) - By 9/1/99, required signage needs to be in place and written notification of the intention to use an ECS needs to be submitted. The ECS shall be in use by 5/1/00. If using cleaning solvent subject to the vapor-pressure limits, the written value of the total VOC vapor pressure of each solvent shall be available on-site by 11/1/99.
- **Rule 336** (Surface Coating Operations) - Compliance with new recordkeeping provisions and submittal of written notification of the intention to use an ECS (if the ECS is used as an alternative to meeting the spray gun provisions or as an alternative to meeting the gun cleaning machine provisions) by 8/1/99. By 11/1/99, continuing use of spray guns and cleaning solvents having the required vapor pressure, with accompanying data sheets. By 5/1/00, the ECS shall be in continuing use.
- **Rule 344** (Automotive Windshield Washer Fluid) - Revisions effective 4/7/99.
- **New Rule 348** (Aerospace Manufacturing & Rework Operations) - Facilities shall comply with all applicable provisions by 10/4/99. Written notification of the intention to use an ECS shall be submitted by 7/6/99 and the ECS shall be in use by 4/7/00.
- **Rule 349** (Pharmaceutical, Cosmetic & Vitamin Manufacturing Operations) - Rule provisions become effective on 7/1/99. Written notification of the intention to use an ECS shall be submitted by 3/16/99 and the ECS shall be in use by 12/16/99.
- **Rule 360** (New Source Performance Standards) - Revisions effective 4/7/99.



On April 21, 1999, Maricopa County adopted the following rule revisions:

- **Rule 316** (Nonmetallic Mineral Mining & Processing) - If you use an ECS as of 4/21/99, you need to file an O&M Plan by 10/18/99.
- **Rule 318** (Approval of Residential Woodburning Devices) and the **Residential Woodburning**

Restriction Ordinance - Revisions became effective 4/21/99.

- **Rule 338** (Semiconductor Manufacturing) - The revisions became effective 6/1/99. An ECS Plan needs to be submitted by the first day of the 4th month after the month in which the facility becomes subject to ECS requirements.
- **Rule 345** (Vehicle & Mobile Equipment Coating) - VOC (volatile organic compound) limits on various primers, topcoats and sealers go into effect on 11/1/99 and 11/1/00. Coatings manufactured before 1/15/99 are exempt from Table 1 VOC limits until 11/1/99. If the facility becomes subject to ECS requirements, an ECS Plan shall be submitted by the first day of the 4th month in which it becomes subject. The ECS is to be in use by 15 months after the facility becomes subject to the requirement. Certain exceedances of quantities of solvents, coatings or waste are to be reported by February 28th or within two months after the end of the calendar year.

On May 5, 1999, Maricopa County adopted the following rule revision:

- **Rule 352** (Gasoline Delivery Vessel Testing & Use) - An ECS application shall be submitted by 8/1/99 and the ECS shall be in use by 5/1/00. Expiration rates for decals varies with date of vessel testing.

On June 16, 1999, Maricopa County adopted the following rule revisions:

- **Rule 310** (Fugitive Dust Sources) - Revisions will become effective 12/1/99.
- **New Rule 310.01** (Fugitive Dust from Open Areas, Vacant Lots, Unpaved Parking Lots, and Unpaved Roadways) - Rule becomes effective 8/1/99.
- **New Appendix C** - The test methods for Rules 310 and 310.01 became effective 6/16/99.
- **Rule 353** (Gasoline in Stationary Dispensing Tanks) - Revisions became effective 6/16/99. Fill-pipe obstructions shall be removed by 11/1/99 unless allowed by permit or CARB-certified. Tanks that were exempt from provisions prior to this revision need to come into compliance by 12/1/99.

Hard copies of rules are \$1.00 each from our office, but are free from the SBEAP web site. Go to www.maricopa.gov/sbeap/ruledesc.htm or call Dee Romesburg at (602) 506-6794 for an order form.

ENVIRONMENTAL LINGO

BIOGENIC - All pollutants emitted from natural sources. Examples include trees and vegetation, and microbial activity.

MOBILE SOURCE - Any mobile source of air pollutants, including all non-stationary sources. This includes on-road vehicles (i.e., cars, heavy-duty trucks) and nonroad engines and equipment (i.e., lawn and garden, recreational, marine, construction, agricultural, aircraft, locomotives, etc.).

NONROAD SOURCE - Also referred to as "off-road" or "off-highway," the nonroad category includes outdoor power equipment, recreational vehicles, farm and construction equipment, boats, and locomotives.

ONROAD SOURCE - All vehicles that are driven on the roadway.

OZONE PRECURSORS - Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are air pollutants which undergo a series of reactions under the influence of sunlight to form more potent air pollutants - photochemical oxidants, chiefly ozone.

OZONE SEASON - That period of the year during which long days, little cloud cover, and warm temperatures make conditions favorable for ozone formation.

POINT SOURCE - Any stationary source for which individual records are collected and maintained. Point sources are usually defined as any facility which releases more than a specified amount of a pollutant.

STATIONARY SOURCE - A source which remains at a fixed location while emitting pollutants. Any non-mobile source of pollutants.



Valley Metro is sponsoring the Care For The Air contest from June 1st through September 30th. It's open to any Valley resident 21 years of age or older and there are several ways to participate:

1. Refuel after 4pm.
2. Walk, bike, bus, telecommute or carpool to work.
3. Sign up for Ozone E-Alerts - your name will be entered in the contest automatically.

It's easy. All you have to do is register each time you participate and you'll be eligible to win weekly prizes and will be entered in the grand prize drawing to win a cruise to Mexico or an E-Bike (electric bike) worth \$1,000. Grand prize drawing will be held on September 30, 1999. To register, you can either fax the form below to **1-877-NOT-SMOG** or you can register online at www.valleymetro.maricopa.gov.

Tune into the following radio stations for prize details: KMLE-FM, KOOL-FM, KZON-FM, KKFR-FM, KYOT-FM, KFYL-AM, and KOY-AM. You can only enter once a day. Employees, principals, and immediate family members of Regional Public Transportation Authority, Chancellor Media, their subsidiaries, or agencies are ineligible. For more information, call (602) 262-RIDE or go to www.valleymetro.maricopa.gov. Good luck!



CONTEST ENTRY

Name _____

Please Circle one: a) Carpool b) Bus c) Walk d) Bike
e) Telecommute f) Refuel after 4pm - attach receipt

Company _____

Phone _____

Email _____
(to receive Ozone E-Alerts)

Fax entries to 1-877-NOT-SMOG

AIR POLLUTION HISTORY - PART II

Last quarter, we focused on the history of air pollution from pre-industrial society to WWII. This issue's article will bring us up to the 1970's.

During the war, there was little time to focus on air pollution problems. In fact, the British government issued a decree in 1940 that told industry to produce as much smoke as possible to confuse the German pilots trying to bomb the city! The results were counterproductive, as German pilots reportedly used the excessively smoking stacks as landmarks for their bombing runs.

After the war, the world's interest turned back to domestic affairs. Several episodes of major air pollution occurred which increased public awareness. In 1948, in Donora, Pa., there was a three day sulfur dioxide episode stemming from stagnant smoke caused by high-sulfur coal burning that caused half of the city's residents to become sick and resulted in 20 deaths.

The City of Los Angeles created the Bureau of Smoke Control in 1945 and then developed the equivalent smoke density measurements later that year. In 1947, the California Legislature adopted an Air Pollution Control Act. This act authorized the formation of an Air Pollution Control District in every county of the state.

A terrible catastrophe occurred in London in 1952. There was a low temperature inversion that was coupled with high emissions from fireplaces and industrial chimneys. This resulted in a killer fog that lasted a total of 6 days and was blamed for 4000 deaths that year. This caused England to pass a Clean Air Act in 1956 that required fuel switching, improved furnaces, and the increased use of electric heat. Within a few years, particulate levels dropped 30%.

In the USA, the first school for black smoke was started by Los Angeles County in 1953, which initiated the standardization of visible emissions programs nationwide. Switching fuel from coal to natural gas resulted in the city of Pittsburgh becoming a "one-shirt town" - previously, pollution was so bad people went to work in one shirt and then changed into a clean shirt once there. In 1955, the federal government adopted the Air Pollution Control Act.

During the 60's, motor vehicle emissions were addressed. In 1959, California developed the first Motor Vehicle Pollution Control Board, four years



earlier than the federal government. In 1963, the first Clean Air Act was passed by Congress, which gave grants to state and local agencies to help them control air pollution. Two years later, the Clean Air Act was amended to include Motor Vehicle Emission Standards. The nation's first auto emissions standards for hydrocarbon and carbon monoxide were adopted in California in 1966.

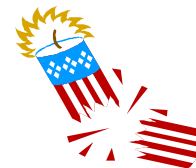
In 1967, many states formed their own air pollution control agencies. The California Air Resources Board was formed by the merger of two agencies - the California Motor Vehicle Control Board and the Los Angeles County Bureau of Air Sanitation. Motor vehicle emissions standards were also set at this time. In 1967, the Federal Air Quality Act was passed, moving the responsibility for automotive controls to the federal government. However, California was given a waiver which allowed it to set and enforce its own emission standards. Finally, the first Ambient Air Quality Standards in the nation were established by California in 1969.

Stay tuned for the conclusion of the history of air pollution in the next issue of Visibility!

AIR RULE WORKSHOPS

All public workshops are held at 1001 N. Central Ave., Suite 560, Phoenix. Draft copies of the rules are available at least one week prior to the workshop at the Air Quality Division, 1001 N. Central Ave., Suite 201. For updates, call our recorded update line at 506-0169. This schedule, current Air Quality Rules, and proposed draft rules are available at <http://www.maricopa.gov/sbeap>.

JULY 1999						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4 July 4th	5 Holiday	6	7	8	9	10
11	12	13	14	15 Workshop	16	17
18	19	20	21	22 Workshop	23	24
25	26	27	28	29	30	31



July 15th
Residential Woodburning
Restriction Ordinance at 9am

July 22nd
Rule 280 (Fees) at 9am

AUGUST 1999						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19 Workshop	20	21
22	23	24	25	26	27	28
29	30	31				



August 19th [Tentative]
Rule 313 (Incinerators) at 9am

SEPTEMBER 1999						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6 Labor Day	7	8	9	10	11
12	13	14	15	16 Workshop	17	18
19	20	21	22	23	24	25
26	27	28	29	30		



September 16th
Rule 310 (Fugitive Dust Sources),
Rule 310.01 (Fugitive Dust from
Open Areas, Vacant Lots,
Unpaved Parking Lots, and
Unpaved Roadways), and
Appendix C at 9am [Tentative]

Rule 320 (Odors and Gaseous
Contaminants) at 1pm

GREEN LEAF POLLUTION PREVENTION PLAN

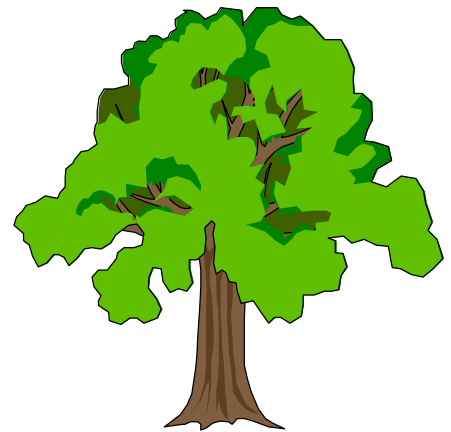
"Turn over a new leaf"

Well-written pollution prevention plans can keep your company proactive and ahead of regulations.

With regulations getting stricter and more confusing, companies would like to ensure their environmental stability for the future. Crucial in providing a secure future is writing and implementing a comprehensive pollution prevention plan, a feat not easily achieved since guidelines to assist environmental managers are hard to find. The process of writing a comprehensive pollution prevention plan is very detailed and time consuming. If written properly, the plan can last for three to four years and exist as a "working document" to provide environmental plans and goals that will keep your company proactive and ahead of regulations. The environmental manager setting up a pollution prevention plan should follow a simple five-step process: **research, set goals, write the plan, obtain feedback and put the plan in action.** Having the help of someone not involved in the process is wise, as he or she provides an objective point of view.

1. Research

Performing an environmental audit of your company is the easiest way to research information for your pollution prevention plan. Outside consultants or federal, state and local authorities are good sources, but internal staff is the easiest starting point. If you use outside consultants, make sure they are familiar with your industry or half your money will be spent educating them. The most accurate auditing is achieved by using internal staff and following up with local and/or state authorities. The Arizona Department of Environmental Quality (ADEQ) has a pollution prevention program that provides assistance to companies by performing site visits or audits that are non-confrontational and used to only provide objectivity.



2. Set Goals

After auditing your company, document the results and use them as a benchmark. Define where your company wants to be in the future. Do you want to stay up-to-date or exceed regulations? For an effective plan, involve employees in definition creation and post the definition everywhere, making sure the definition is easy to read, understand and obtain. If the strategic planning process begins by defining an unrealistic future, the plan is doomed for failure.

An example of a good definition is: ***(Company Name) shall be defined as a company that exceeds all environmental regulations, prevents pollution, promotes recycling and minimizes waste. We will self-audit our internal practices and look for additional ways to reduce waste and prevent pollution.***

Once you define where the company wants to be, specific goals for the future should be set that are clearly defined, understandable and obtainable. They should be achievable through positive actions of the employees or by actual business process changes, and should not be set on business fluctuations or market trends. Setting goals encourages employees to change their work habits and become proactive. Setting goals to business fluctuations or market trends will lead to false results and invite challenges to your environmental record. The goals should involve all areas of the company operations - getting only one area of the company involved is not enough to ensure success. If possible, tie the goals to a money- or percent-change amount. These are not only easy to manage but are a visible sign of improvement.

For example, some goals to list in the plan might include:

- Reducing municipal waste by 30% by incorporating a recycling program;
- Reducing landfill wastes to 10% of total waste generated;
- Recycle 80% of all office papers;
- Reuse 30% of all process water;
- Find alternative uses for certain wastes; and
- Buy right & look at MSDS

The last step in writing goals is to decide how to publish the results and inform everyone of progress. Posting results on bulletin boards, in restrooms and lunchrooms, and conducting department meetings are the best ways to spread the news. Hold small appreciation parties when crucial goals are achieved.

3. Writing the Plan

After setting goals, make plans to achieve the goals. What steps are required to reduce stack emissions? How can water be recycled in the cleaning process? To achieve goals, proper efforts must be mapped out. When discussing pollution prevention, make sure land, water, air and noise issues are covered.

Follow all regulated permits and plan to exceed them.

Flowcharting all processes, indicating the amounts of raw materials used and the amount of waste generated at each step, is one good method to incorporate waste source reduction. Look for the areas that generate the most waste and determine if the step can be modified to reduce the amount of raw material used or the amount of waste generated. Keep good records and document your efforts. An opportunity for employee participation is to develop a suggestion program for workable waste reduction ideas. One incentive is to provide a monetary award based on a percentage of waste costs saved.

Incorporating recycling programs is perhaps the easiest method of advancement. Local municipalities are eager to increase the number of recycling businesses and may provide a business drop-off point to stimulate interest. Participate in the community by working with civic organizations to organize recycling drives using your business as the drop-off point. Offer employees the opportunity to collect aluminum cans or newspapers for their own benefit. Another idea is to provide a rotation for all departments to host a drop-off point and then use the money for a department party or lunch.

Energy bills and individualized monitoring devices can help determine which department uses the most energy. Common methods of energy conservation - turning off lights or not heating unused rooms - can help reduce energy consumption. Turn to the U.S. Environmental Protection Agency's Green Lights program to conserve electricity. Bring in your local energy suppliers (electric, natural gas, oil) to evaluate your efforts and propose

suggestions for conserving energy. Conserving water is also another way to reduce energy bills.

Natural resource conservation is an often-overlooked point in environmental plans. Is there a way to reduce the use of "virgin" materials in your facility? Recycled paper can be used in offices for copying, printing or letterhead. Obtaining cardboard boxes with a recycled content for packaging and printing without a paper overlay on cardboard boxes conserves many trees. Investigate any raw materials coming into the company and ask if there is a viable recycling alternative. Remember not to substitute a product just because it is recycled. If it increases waste or produces a lower quality end product, don't bother. **Cost-benefit analysis** should be performed on any changes before implementing them.



4. Feedback and Implementation

After writing the plan, review it with your employees, state and local agencies and an outside source. Listen to concerns and suggestions. Modify your plan and incorporate ideas to make the plan more comprehensive. Then publish it and begin to implement the methods.

Through proper strategic environmental planning and by developing a proactive pollution prevention plan, you may find some extra assistance from the local and state authorities when new permits are required. If the plan is focused correctly, it will save money through decreased waste and energy costs, and create paybacks from recycling. Raw material costs may decrease by using less or using less expensive recycled materials. Employee morale may reach a new high due to the feeling of participation in a program aimed to advance the company through their support and efforts.

Don't be surprised by the amount of phone calls you receive from other businesses wanting to follow in your footsteps. You may even get complaints that you are making other businesses look bad.

Just remember - you aren't making others look bad, you are leading the business community into the future and protecting your assets.

- SBEAP

SMOKING VEHICLE PROGRAM

Frustrated by cars spewing tailpipe smoke? Pick up the telephone and report it to the Maricopa County Environmental Response Line at (602) 506-6616. Maricopa County has added the Smoking Vehicle Program to their Environmental Response Line, which accepts other types of environmental complaints.

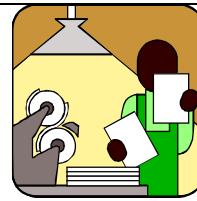
Operators at the other end of the line will take down the license plate number and send out a letter informing the owner that their car was reportedly emitting smoke and to have it repaired.

Emissions from motor vehicles are the number one source of air pollution in the Phoenix metropolitan

area. One of the best ways to prevent pollution is to properly maintain your vehicle so it doesn't become a public health nuisance.

There are no penalties or fines placed on the owner who is reported to the hotline. However, driving an excessive smoking vehicle is against the law and can lead to a citation. The Maricopa County Environmental Services Department recently assumed the program from the state and is receiving double their regular volume of 400 calls per week.

To report a smoking vehicle or make other types of environmental complaints, call (602) 506-6616.



FINAL VOC LIMITS FOR PRINTERS IN EFFECT

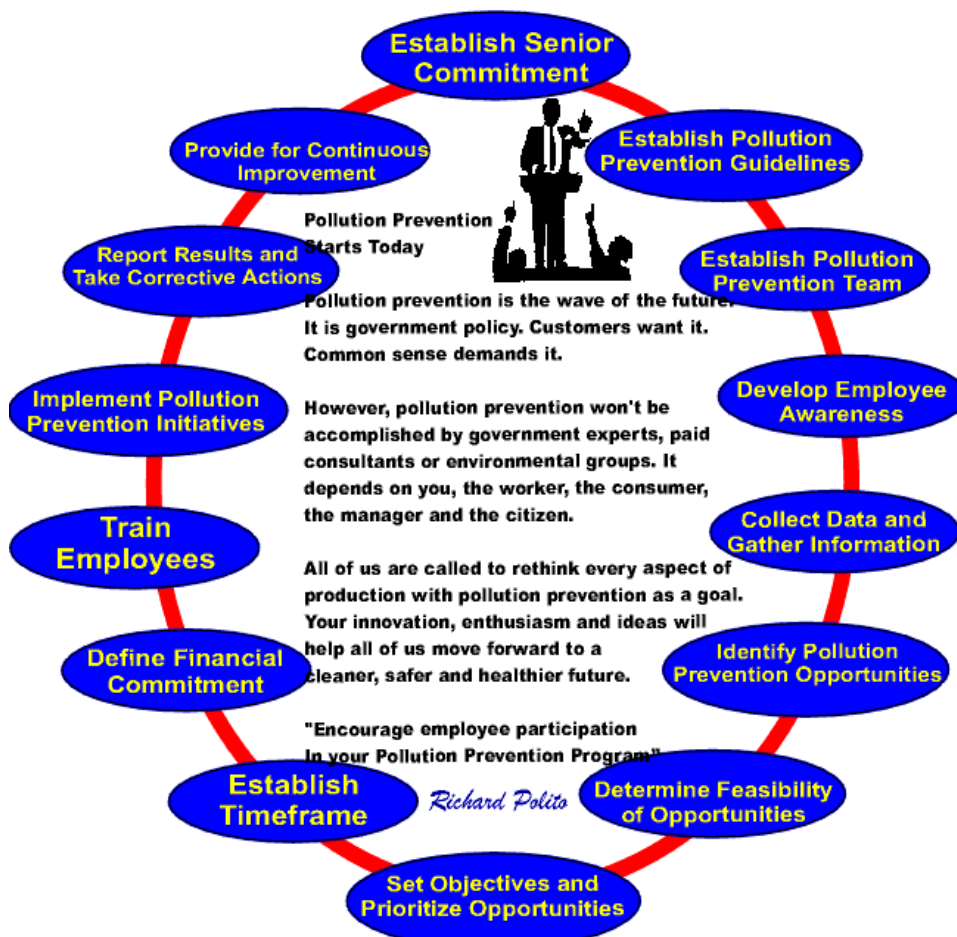
On March 28, 1999, the last step was taken in a program begun 4 years ago by Maricopa County and the Printing Industries Association of Arizona (PIAZ). This was a 4-stage process, accomplishing two important goals to reach our objective: Reduce the total VOC (volatile organic compounds) that lithographic printers put into the air. The final limits for offset lithography set by County Air Pollution Control Rule 337 (Graphic Arts) are now law:

- No more than 5% alcohol or other VOC is allowed in unrefrigerated fountain solution.
- Up to 8.5% is allowed if refrigerated below 60°F.
- Cleaning solutions used in Maricopa County have a VOC vapor pressure limit of 10 millimeters of mercury, a little less than half the vapor pressure of toluene – once a favorite among some printers.

VOC produces ground-level ozone. Ozone irritates lung tissue and further degrades the health of persons with low resistance. Ozone permanently damages the lungs of some city dwellers.

Before the initial limits were put into Rule 337, many printers were already experimenting with and discovering which low-VOC fountain solution concentrate worked best for them. All printers who tried were eventually successful. A very small number have put in refrigeration to allow the somewhat higher VOC level, rather than doing more experimenting with very low-VOC solutions. For cleaning solutions, there are a variety of products made by printers-supply companies that meet the vapor pressure limits. If you've been having problems, please call the Small Business Environmental Assistance Program at (602) 506-5102, or call PIAZ at (602) 265-7742.

POLLUTION PREVENTION WHEELS IN MOTION



CHANGES TO RULE 345 (VEHICLE & MOBILE EQUIPMENT COATING)



evaporates when paint cures, and it's the evaporated VOC that causes harmful, ground-level ozone to form in warm, sunny weather.

Few Changes For Most

For the majority of car refinishers and collision craftspersons, the rule revision will have very little effect because the national rule prevents the refinisher of light-duty vehicles from buying coatings that are illegal; no jobber is allowed to sell them. The VOC limits in Table 1 of the rule are exactly the same as in the national rule. You are allowed to use up old paint made prior to this year, but you are not allowed to use new paint you've brought in from another country that has too high a VOC content - that's a Federal offense. It's expected that the most common violation will continue to be the use of surface preparation liquids having more than 1.4 lbs VOC per gallon - a limit that has been in place since February 1995.

Big Rigs

On the other hand, the few facilities that refinish big rigs have a stricter standard, which the County negotiated with their representatives. Large trucks,

buses, moving vans, truck tractors and their trailers, must use the VOC limits in Table 2 of the rule. But these big rigs have a 1 liter spot painting allowance that is not granted to cars or other vehicle types. Until November of 2002, spot paint can have up to 5 lbs VOC per gallon.

Everything Else, See Table 3

If you paint any never-coated surface that isn't part of a larger refinishing job on either a licensable big rig or a light duty vehicle, your coating can't have more than 3½ lbs VOC per gallon if applied to bare metal or hard plastic. And if you refinish any other "vehicle" beside big rigs and light-duty vehicles, anything from farm equipment to earth-movers, the coating is also limited to 3½ lbs VOC per gallon as applied.

Jobbers Job

Rule 345 now requires jobbers to keep records of how much VOC they sell to refinishers in Maricopa County.

Almost Everything On The Road

On April 21, 1999, Maricopa County adopted a significant revision to Rule 345. The rule title changed from "Vehicle Refinishing" to "Vehicle and Mobile Equipment Coating" because the rule now covers original equipment coating as well as refinishing. The coating of any vehicle with tires that can move or be towed on a highway is included, excluding only new, light-duty vehicles on large production lines.

Quick & Dirty VOC Story

The revision limits how much VOC can be in each general category of primers and topcoats. Refinishing is now regulated by 2 sets of VOC limits:

- National VOC limits for cars, pickups, other light duty vehicles, and motorcycles; and
- Maricopa County limits for all other vehicles.

It's the VOC portion of coating that

SBEAP HIRES NEW ENGINEER



On May 17, 1999, Jae Chang started work with the Small Business Environmental Assistance Program (SBEAP). Jae has worked as a permit engineer with MCESD for the past year and was previously employed as an Environmental Engineer for a soil remediation company. He graduated with a chemical engineering degree from the University of Arizona.

Jae and the SBEAP staff can assist you with the entire process from the pre-permitting meeting to an on-site assessment (as necessary). Take advantage of the SBEAP and Jae's knowledge when you need to renew your MCESD air quality application or modifications. You can check out our website at www.maricopa.gov/sbeap or call us at (602) 506-5150.



COOL WEBSITES

If you know of a website you think other readers would like to see, please email it to: dromesbu@mail.maricopa.gov.

"Green Car: A Guide to Cleaner Vehicle Production, Use, and Disposal" is available at the web site www.edf.org/greencar and provides information on the environmental impacts of motor vehicles from the cradle to the grave.

The Printers' National Compliance Assistance Center provides the most current and complete compliance assistance and pollution prevention information to the printing industry at www.pneac.org/pneac.html.

CCAR-GreenLink offers information on environmental issues to all parts of the automotive industry at www.ccar-greenlink.org.



COULD YOU PASS 100 RIGOROUS TESTS EVERYDAY?

YOUR TAP WATER CAN.

More than 100 tests are performed on your tap water to ensure it is always completely safe to drink. The Valley's tap water must meet all standards set by the Environmental Protection Agency (EPA) and the Arizona Department of Environmental Quality (ADEQ). Valley water providers are committed to maintaining the safety and quality of your tap water.

So, if you want to ensure the safety of your drinking water...
Tap into Quality ... the assurance of tap water.



Brought to you by Valley cities, Arizona Department of Environmental Quality, Maricopa County, the Salt River Project (SRP) and the Central Arizona Project (CAP)

REDUCE WASTE!

We have a great idea to help you reduce waste and pollution - read *Visibility* on the internet! Not only will you save paper and mailing labels, but you'll also be able to see *Visibility* before anyone else. Every issue is available on our website at www.maricopa.gov/sbeap. You can also receive notification when each new issue is available via e-mail. Just send your name, company name, phone number, and e-mail address to Dee Romesburg at dromesbu@mail.maricopa.gov or call (602) 506-6794.

THE VISIBILITY NEWSLETTER

is published quarterly by the Pollution Prevention Committee of the Maricopa County Environmental Services Department (MCESD). Questions and requests to be added to the mailing list or email notification list may be addressed to Dee Romesburg at 1001 N. Central Ave., Suite 201, Phoenix, AZ 85004, by phone at (602) 506-6794, or by email at dromesbu@mail.maricopa.gov.

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